MOLOTHRUS ATER AND HIS HOSTESSES.

NOTICING the article by Charles W. Hargitt, Ph. D., in *Science* for Dec. 1, in regard to the cowbird, I am prompted to relate my experience, since what seems to be with him a rare occurrence, is, in my locality at least, a very common one. I refer to the appropriation of the chipping sparrow's nest by this parasite as a receptacle for its eggs.

It has been my experience with the chipping sparrow, as it has Mr. Hargitt's, that it is exceedingly sensitive about having its nest disturbed, and will desert it upon the least provocation, even though the full complement of eggs may have been deposited. It has seemed to me sometimes that merely a sudden discovery of the nest, with the bird upon it, was all the ground the bird needed as a cause for a hasty removal from those parts, even though not a twig or portion of the tree or bush be touched. This I have particularly noticed, and as I have been making this species a special study the past Summer, I have had occasion to note many times the exceeding sensitiveness of the bird in this regard.

But much as *Spizella socialis* dislikes to have her nest disturbed, my observations have been to the effect that her likes and dislikes are not at all regarded by the cowbird. The evidence which my observations have produced along this line is quite to the contrary of that which Mr. Hargitt's observations find. I well remember that the first egg of the cowbird ever found by myself, in those days of fond recollections when I first began the delightful pursuit now so dear to me, rested snugly in a nest of the chipping sparrow. Since that time I have never dreamed of this being a rare occurrence, for I have so found them times without number; and in several instances have known the hostess so imposed upon, contrary to her exceeding wariness of being disturbed, to accept the situation forced upon her and rear the alien vagabond. I have also found that, in cases where the cowbird found *Spizella's* nest to contain but one egg of its owner, it will sometimes deposit more than one of its own; in one case, I found three. In such instances, the chipping sparrow, of course, does not accept the situation,—the *sit*-uation is doubtless too large for such a small bird to accept. I can only say in conclusion of this part of my subject that my observations lead me in quite the opposite direction from Mr. Hargitt's conclusion, for I certainly have found *Spizella socialis* a very commonly imposed-upon hostess of the cowbird.

I have at different times found eggs of *Molothrus* in what seemed to me to be out-of-the-way places for them. Among these "out-of-the-way places" I would mention the nests of the meadowlark, robin and kingbird, for I have found them there, and apparently no attempts had been made to remove them from the nest, for in the cases of the meadowlark and kingbird they were equally advanced in incubation with the rightful occupants.

And now, if I may be pardoned for deviating somewhat from my subject, and since the chipping sparrow's sensitive nature is before us for consideration, I would like to ask for enlightenment from more experienced heads than mine in regard to a matter that has puzzled me. The past summer I found a nest of the chipping sparrow containing four eggs. Meaning to test the bird's sensitive nature in this case, I did not so much as touch any portion of the evergreen tree containing the nest, but hastily removed from the locality. Returning two days later to learn if, perchance, the bird had deigned to still occupy her well-hidden home, I found that in place of the four eggs only two remained. Returning again the next day, I found but one egg in the nest, and coming again the following day, I found an empty nest. The eggs must have been removed from the nest without being broken, for not a trace of an egg-shell was anywhere about.

This in and of itself would not necessarily be a very remarkable occurrence, but this is only one instance. I have several times observed the same things in cases where a nest of the chipping sparrow had been discovered containing eggs.

Can the editor of *Science* or any of its readers offer a solution of this problem? I should be interested to hear.

The chipping sparrow is well worthy the study of everyone. Many excellent traits of character will be discovered.

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PROTECTION OF BIRDS FROM THE BOYS.

IN *Science*, Nov. 10, Dr. Shufeldt charges the "small boys" with being the most destructive of all the agencies that are operating to exterminate our beautiful and useful birds. Teachers in urban schools who conscientiously study the daily conduct of their pupils and inquire of them as to their daily associations know that the Doctor's statements are sadly near the truth. The accusation would better be made without limitation in the size of the boys. In every city and town, and in many villages, there is a considerable population living in homes entirely destitute of humanizing influences. The children of this class run at large, exercising their brutal and vicious instincts, and the unlimited slaughter of innocent birds is one of the results.

The evil being defined and located, the remedy is indicated. We look to the public schools for the redemption of Young America. The rapidly broadening scope which is being permitted in the work of the schools opens the way for a campaign of education.

Several lines of attack will at once suggest themselves to teachers and others who are interested. Some of these I will mention.

1. *Punishment of the guilty under such laws as exist for the protection of birds.* No teacher is likely to use this means except in extreme cases.

2. *Teaching beautiful sentiments about birds and bird life.* This is good so far as it goes. Kindly feelings are aroused and strengthened. But many hardened ones refuse to be touched and seize the first opportunity to show their defiance in a practical manner. At the best this course gives little real knowledge of the birds and the children remain strangers to them while they should have most intimate daily acquaintance. The proper place for such teaching is supplemental to the following.

3. *Close, accurate, continued study of birds, their ways, and their works.* By this procedure the work is given an intellectual basis. This method rests on a sound psychological principle. Any student of birds who can recall the impressions of his early studies knows that every new perception of beauty and adaptation in the structures of his specimens increased his regard for the living forms and restrained him from needless destruction of their lives even for legitimate purposes of study. The same key will open the way to the feelings of most boys. The glittering plumage in the bush excites the savage instinct to possess it. This interest is only momentary, and when the coveted object has been brought down by stone or shot it is soon flung aside. It would be a hundred times better if the boy shot birds to study them, but that is not necessary. Plenty of material may be collected without intentionally taking the life of a single bird, and we may hope to